



U.S. Preventive Services Task Force Recommendation Statement: Screening for Latent Tuberculosis Infection (LTBI) in Adults

Centers for Disease Control and Prevention

Division of Tuberculosis Elimination

September 2016

Background

The U.S. Preventive Services Task Force (USPSTF) published a new recommendation to test for latent tuberculosis (TB) infection (LTBI) in populations at increased risk.

The TB community has a unique opportunity to use the announcement of this recommendation to draw attention to LTBI and educate the public, health care providers, at-risk populations, and policy makers on the importance of targeted testing and treatment for LTBI.

Key Messages of this Presentation

1. Eliminating TB in the United States requires expanding testing and treatment of LTBI.
2. The Centers for Disease Control and Prevention (CDC) and the USPSTF recommend testing populations that are at increased risk for TB infection.
3. Clinicians, health care agencies, and community organizations, especially those serving at-risk populations, have a critical role in TB elimination.

LTBI in the United States

- Up to 13 million people in the United States are estimated to have LTBI.
 - While TB disease is a nationally notifiable disease, LTBI is not reported to CDC.
 - Despite declines of TB disease in the United States, there has been no significant change in the rate of LTBI over the last decade.
- More than 80% of U.S. TB cases are believed to be associated with longstanding untreated LTBI.

Addressing LTBI to Accelerate TB Elimination

- CDC's Division of Tuberculosis Elimination has a central role in encouraging expansion of LTBI testing and treatment in the United States.
- Targeted testing and treatment of persons at greatest risk for TB is the most effective way to further reduce the number of new TB cases in the United States.

U.S. Preventive Services Task Force (USPSTF)

USPSTF

- The USPSTF is an independent, volunteer panel of national experts in prevention and evidence-based medicine.
- The primary goal of the USPSTF is to develop and disseminate evidence-based recommendations about clinical preventive services such as screenings, counseling services, and preventive medications.
- Recommendations are developed based on rigorous review of existing peer-reviewed evidence, and evaluation of benefits and harms.
- Recommendations address only services offered in the primary care setting or services referred by a primary care clinician.
- Recommendations apply only to people who have no signs or symptoms of the specific disease or condition that the screening, counseling, or preventive medication targets.
- Recommendations are available online and in peer-reviewed literature.
 - <http://www.uspreventiveservicestaskforce.org/BrowseRec/Index/browse-recommendations>

USPSTF

- Every USPSTF recommendation is assigned a letter grade
- These grades are based on the strength of the evidence on a specific preventive service

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

<http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm>

History of USPSTF LTBI recommendations

- 1996: USPSTF recommended (Grade A) LTBI screening of high-risk persons.
- 2002: USPSTF deferred to CDC LTBI testing recommendations to avoid duplication of other Federal Agency efforts (no USPSTF Grade issued).

For current recommendation

- 2013: CDC and the Agency for Healthcare Research and Quality signed an interagency agreement to initiate a review.
- 2014: USPSTF posted LTBI Research Plan for 30-day public comment period.
- 2016: USPSTF posted Recommendation and Evidence Review for 30-day public comment period.
- 2016: USPSTF published final Recommendation.

Questions Considered for USPSTF Recommendation

- Benefits of screening
 - *Does screening for the disease result in decreased incidence?*
 - *Does screening result in reduced mortality or morbidity?*
 - *Are screening tests accurate and reliable?*
 - *Are sequential screening strategies accurate and reliable?*
- Risks of screening
 - *Are there harms to screening or the diagnostic work-up?*
- Benefits of treatment
 - *Does LTBI treatment reduce transmission of TB and mortality?*
- Risks of treatment
 - *Are there harms associated with treatment of LTBI?*

2016 USPSTF Recommendation

2016 Recommendation

The USPSTF recommends screening for LTBI in populations that are at increased risk (B recommendation)

Population	Recommendation	Grade (What's This?)
Adults who are at increased risk for tuberculosis	The USPSTF recommends screening for latent tuberculosis infection (LTBI) in populations that are at increased risk.	B

*B Recommendation = USPSTF recommends this service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.

2016 USPSTF Recommendation

- This recommendation applies to asymptomatic adults ≥ 18 years of age who are at increased risk for TB and are seen in primary care settings.
 - Born in, or former residents of, countries with increased tuberculosis prevalence (*e.g., Mexico, Philippines, Vietnam, India, China, Haiti, Guatemala*)
 - Currently live in, or have lived in, high-risk congregate settings (*e.g., homeless shelters, long-term care facilities, correctional facilities*)
- It does not apply to adults with symptoms of TB disease or children and adolescents (children and adolescents screening addressed in Bright Futures).

Additional Populations at Risk for LTBI

- The recommendation does not address the additional need for LTBI testing in other high-risk populations.
- CDC recommends the following populations continue to be tested for LTBI as part of other screening efforts:
 - Persons with immunosuppression: TB testing is included in standards of care for disease or medical management for HIV/AIDS, immunosuppressive medications, and silicosis.
 - Persons who are contacts of persons with active TB disease: TB testing is conducted as part of public health programs.
 - Health care workers and workers in high-risk congregate settings: TB testing is conducted as part of employee health programs.

Bright Futures: TB Testing for Children

- Bright Futures is a national health promotion and prevention initiative, led by the American Academy of Pediatrics and supported by the Maternal and Child Health Bureau, Health Resources and Services Administration.
- Bright Futures recommends TB testing for children at high-risk, and many health plans are required to cover the service under the Patient Protection and Affordable Care Act (ACA) at no-cost.



Bright Futures Medical Screening Reference Table
12 Month Visit

Selective Screening	Medical History Risk Factors	Risk Assessment ^a	Action if Risk Assessment Is Positive
Tuberculosis		<ul style="list-style-type: none">• Was your child born in a country at high risk for tuberculosis (countries other than the United States, Canada, Australia, New Zealand, or Western Europe)?• Has your child traveled (had contact with resident populations) for longer than 1 week to a country at high risk for tuberculosis?• Has a family member or contact had tuberculosis or a positive tuberculin skin test?• Is your child infected with HIV?	Tuberculin skin test

Implications of USPSTF Recommendation for Public Health

Strategic Implications of Recommendation

- USPSTF recommendation can serve as a catalyst for increasing focus on LTBI targeted testing and treatment, particularly in persons who reside in, but were born outside of, the United States.
- The recommendation is a critical tool for moving TB elimination efforts forward by addressing the reservoir of LTBI.

Relation to the Patient Protection and Affordable Care Act (ACA)

- Under the law, preventive services with a USPSTF Grade of A or B are covered without cost-sharing (e.g., copayment or deductible) by many health insurance plans or policies
- Plans subject to this requirement (i.e. “nongrandfathered” plans) must comply within the first plan year that begins one year after the September 6, 2016 USPSTF recommendation
 - For example, plan years that begin January 1st will have to comply by January 1, 2018 at the latest

Impact to Medicare and Medicaid

- For LTBI screening without cost-sharing to be available to Medicare beneficiaries, the Centers for Medicare and Medicaid Services must first complete a Medicare National Coverage Determination.
- LTBI screening may not be available without cost-sharing to traditional Medicaid beneficiaries.
- LTBI screening may be available to Medicaid beneficiaries enrolled in alternative benefit plans.

Implications of USPSTF Recommendation for Clinical Practice

USPSTF Recommendation: Implications for Clinical Practice (1)

- TB control and prevention has traditionally been a function of state and local public health departments.
- However, many people at high risk for TB infection and TB disease who need to be tested and treated receive care from private healthcare providers and community health centers.
- The USPSTF recommendation expands opportunities for additional public and private health care providers to prevent and control TB.
- Providers should consult with their local or state health departments for populations at risk in their communities based on local demographic patterns.

USPSTF Recommendation: Implications for Clinical Practice (2)

- In the near future, many health plans should cover LTBI screening without cost-sharing for at-risk asymptomatic adults age ≥ 18 years in the following groups when using a provider within the health plan's network:
 - Persons born in, or former residents of, countries with increased TB prevalence
 - Persons who currently live in, or have lived in, high-risk congregate settings
- Other adults assumed to be at risk for LTBI may incur cost of co-pays, co-insurance, or deductibles for LTBI screening (depending on type of health coverage and setting in which screening is provided).

Additional Resources on LTBI Testing and Treatment

Related Guidelines

- American Thoracic Society and CDC Statement: Targeted tuberculin testing and treatment of latent tuberculosis infection. [MMWR Recomm Rep. 2000;49\(RR06\):1-54](#)
- Guidelines for the investigation of contacts of persons with infectious tuberculosis. [MMWR Recomm Rep. 2005;54\(RR-15\):1-47](#)
- Guidelines for preventing the transmission of Mycobacterium tuberculosis in health-care settings, 2005. [MMWR Recomm Rep. 2005;54\(RR-17\):1-141](#)
- Occupational Safety and Health Administration. Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis. [Directive No. CPL 02-02-078](#)

CDC Resources for General Awareness and Patient Education

- [CDC Latent TB Infection Resources](#)

- [Key Messages and Resources](#)
- [Matte Articles](#)
- [Slide Sets](#)

- [Infographics](#)

- [Fact Sheets and Patient Education Materials](#)

- [CDC TB Website in English](#)

- www.cdc.gov/tb/

- [CDC TB Website in Spanish](#)

- www.cdc.gov/esp/

What You Need to Know About Your Medicine for Latent Tuberculosis (TB) Infection

ISONIAZID and RIFAPENTINE

You have been given medicine to treat your latent TB infection. You should know the correct way to use your medicine. You should know why you need to get your TB medicine every day.

Remember to Take Your Medicine Exactly

You will need to take your medicine exactly as your doctor tells you. The way you take your medicine is very important. You should know why you need to take your medicine exactly.

Watch for These Possible Problems:

STOP

Call your doctor if you have any of these problems:

- You feel sick or have a fever
- You have a cough or shortness of breath
- You have a headache or dizziness
- You have a rash or skin irritation
- You have a change in your vision
- You have a change in your taste or smell
- You have a change in your voice
- You have a change in your appetite
- You have a change in your weight
- You have a change in your energy
- You have a change in your mood
- You have a change in your behavior
- You have a change in your thinking
- You have a change in your feelings
- You have a change in your actions
- You have a change in your relationships
- You have a change in your life

What to Do About Problems:

- If you have any of these problems, call your doctor right away.
- Do not stop taking your medicine unless your doctor tells you to.
- If you have a change in your vision, stop taking your medicine and call your doctor right away.
- If you have a change in your taste or smell, try to eat and drink as much as you can.
- If you have a change in your voice, try to talk to your doctor about it.
- If you have a change in your appetite, try to eat and drink as much as you can.
- If you have a change in your weight, try to eat and drink as much as you can.
- If you have a change in your energy, try to rest and get up when you feel better.
- If you have a change in your mood, try to talk to your doctor about it.
- If you have a change in your behavior, try to talk to your doctor about it.
- If you have a change in your thinking, try to talk to your doctor about it.
- If you have a change in your feelings, try to talk to your doctor about it.
- If you have a change in your actions, try to talk to your doctor about it.
- If you have a change in your relationships, try to talk to your doctor about it.
- If you have a change in your life, try to talk to your doctor about it.

Remember: You should take your medicine every day, exactly as your doctor tells you. You should know why you need to take your medicine exactly. You should watch for these possible problems. You should call your doctor if you have any of these problems. You should not stop taking your medicine unless your doctor tells you to. You should eat and drink as much as you can. You should rest and get up when you feel better. You should talk to your doctor about any changes in your mood, behavior, thinking, feelings, actions, relationships, or life.



TAKE ON LATENT TB INFECTION

Eliminating tuberculosis (TB) requires expanding testing & treatment of latent TB infection.

THINK LATENT TB INFECTION!

CDC works to develop latent TB infection guidance & tools.

www.cdc.gov/tb

CDC

Center for Disease Control and Prevention
1600 Clifton Road, NE
Atlanta, GA 30333

TB Elimination
The Difference Between Latent TB Infection and TB Disease

What is TB?

Tuberculosis (TB) is a disease caused by a germ called Mycobacterium tuberculosis that is spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the spine, and the bones. When a person gets TB infection, TB might or might not become an illness. If another person catches TB, they might have TB infection, but not everyone infected with TB becomes sick. As a result, new TB-related conditions need latent TB infection and TB disease.

What is Latent TB Infection?

Persons with latent TB infection do not feel sick and do not have any symptoms. They are infected with TB infection, but do not have TB disease. The only sign of TB infection is a positive test for TB infection. Latent TB infection is not infectious and cannot spread TB infection to others.

What is TB Disease?

In some people, TB bacteria cause the infection of the immune system and begin to multiply, resulting in the progression from latent TB infection to TB disease. Some people develop TB disease soon after infection, while others develop TB disease later when their immune system becomes weak.

The general symptoms of TB disease include:

- Unexplained weight loss
- Loss of appetite
- Night sweats
- Fever
- Fatigue
- Cough

Of special concern are persons infected by someone with multidrug-resistant TB (MDR-TB) who later develop TB disease. These persons will have MDR-TB, and require TB treatment.

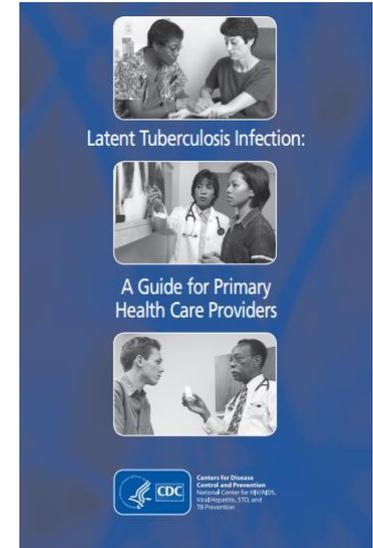
CDC Resources for Healthcare Workers

- Resources for Clinicians

- Continuing education activities
- Guidelines and information on testing, diagnosis and treatment

- Resources for TB Programs

- Continuing education activities
- Guidelines and information on contact investigations, program evaluation, surveillance, and support



Helpful Links

- [State TB Control Programs](#)
- [Find TB Resources](#) is a worldwide library of online resources, training, and educational materials and resources about TB.
- CDC funds five [Regional Training and Medical Consultation Centers](#) to provide training, technical assistance, and medical consultation to TB programs and medical providers.
- The [TB Education and Training Network](#) brings TB professionals together to network, share resources, and build education and training skills.
- [National Prevention Information Network](#)

Helpful Links

- [U.S. Preventive Services Task Force](#) Final Recommendation
- [Journal of the American Medical Association](#) Recommendation Statement
- [CDC Statement](#) on U.S. Preventive Services Task Force Latent TB Screening Recommendation

In Summary

- TB cannot be eliminated in the United States without increased efforts to test and treat LTBI.
- The USPSTF recommends screening for LTBI in adult populations that are at increased risk (B recommendation).
- USPSTF recommendation is a catalyst for increasing focus on LTBI targeted testing and treatment.
- The USPSTF recommendation expands opportunities for private health care providers to play a critical role in TB control and prevention.